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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,480	03/31/2004	Karen K.Y. Young	022101-000230US	8589

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EXAMINER

MOSHER, MARY

ART UNIT	PAPER NUMBER
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1648

MAIL DATE	DELIVERY MODE
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12/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/815,480

Applicant(s)

YOUNG, KAREN K.Y.

Examiner

Mary E. Mosher, Ph.D.

Art Unit

1648

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/8/07, 9/10/07.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) 1-27 and 51-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The examiner of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 1648, examiner Mosher.

Response to Arguments

Applicant's arguments filed 10/815480 are convincing, and the rejections of record are withdrawn. However, new rejections are made below.

Response to Amendment

The amendment after final rejection, filed 5/8/2007, has been entered. Finality of the last Office action is withdrawn.

Election/Restrictions

In response to applicant's arguments, claims 37-39 are rejoined with the examined claims. Therefore claims 28-50 have been examined.

Claims 1-27, 51-56 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group or species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 3/9/2006.

Claim Rejections - 35 USC § 112

Claims 28-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are drawn to a kit with three oligonucleotides. The second and third oligonucleotides are described in claims 28

functional terms, as oligonucleotides that hybridize to a recited sequence. However, the claim does not set forth any hybridization conditions. The conditions strongly affect which oligonucleotides hybridize to a given sequence. As written, therefore, the metes and bounds of the second and third oligonucleotides are not set forth in the claim. Since none of the dependent claims adequately define both the second and the third oligonucleotides in the same claim, this rejection applies to all of the dependent claims as well.

Allowable Subject Matter

Claim 28 involves three oligonucleotides, all of which correspond to regions in the 3' untranslated region of West Nile virus (WNV). Referring to the genome of known WNV isolates such as Egypt 101, SEQ ID NO:8 corresponds to nucleotides 10606-10630, SEQ ID NO:9 to nucleotides 10953-10929, and SEQ ID NO:16 to the sequence repeated at nucleotides 10800-10827 and 10874-10898.

Prior art teaches use of conserved regions as probes and primers for detection of various flaviviruses, see for example Warrilow et al (Journal of Medical Virology 66:524-528, 2002), Fulop et al (Journal of Virological Methods 44:179-188, 1993), Pierre et al (Res. Virol. 145:93-104, 1994), Scaramozzino et al (Journal of Clinical Microbiology 39:1922-1927, 2001), and Tanaka et al (Journal of Virological Methods 41:311-322, 1993). Prior art also teaches that there are regions of conserved secondary and primary sequence in the 3' end of flaviviruses, see for example Olsthoorn et al (RNA 7:1370-1377, 2001), Rauscher et al (RNA 3:779-791, 1997), Lo et al (Journal of Virology 77:10004-10014, 2003), Batista et al (Virus Research 75:35-42, 2001), and Wengler et

al (Journal of General Virology 67:1183-1188, 1986). The conserved regions include the regions covered by SEQ ID NO:9 and SEQ ID NO: 16. However, the prior art on conserved sequences apparently does not provide any reason to choose the region covered by SEQ ID NO:8.

Linnen US 7115374 teaches a primer very similar to SEQ ID NO:8, see SEQ ID NO: 74-77, but does not provide any reason to combine the primer with SEQ ID NO: 9 and 16, nor does Linnen suggest conservation of the sequence among the JEV group of flaviviruses. Shymala US 7132233 teaches a primer very similar to SEQ ID NO:9, see SEQ ID NO: 50, but does not provide any reason to combine the primer with SEQ ID NO:8 and 16, nor suggest conservation of the sequence among the JEV group of flaviviruses.

Therefore the claims are seen as free of the art.

Claims 28-33 would be allowable if claim 28 specified SEQ ID NO: 15 or 74 as the second oligonucleotide, and SEQ ID NO: 28 as the third oligonucleotide. Dependent claims 35, 36, 38, 39 and 41-50 then would also be allowable if amended for appropriate claim dependence.

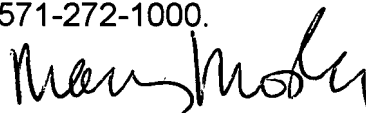
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary E. Mosher, Ph.D. whose telephone number is 571-272-0906. The examiner can normally be reached on varying dates and times; please leave a message..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campbell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Mary E Mosher, Ph.D.
Primary Examiner
Art Unit 1648

12/20/07